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# AGRICULTURAL MARKETING

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U. S. DEPARTMENT OF AGRICULTURE



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U. S. DEPARTMENT OF AGRICULTURE • AGRICULTURAL MARKETING SERVICE

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**November 1956**

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**Editor (acting) Milton Hoffman**



# Use of FROZEN FOODS BY RESTAURANTS

By Henry T. Badger



The more meals you eat out, the more likely it is that you'll be eating food that has been frozen. You'll probably be served a greater variety of fruits and vegetables that have been frozen if you order the more expensive meals.

Restaurants today are using a much greater proportion of frozen foods than they did a few years ago. This is particularly true of the larger restaurants and those serving meals of \$1 and over.

To find out the extent to which frozen foods were being used by restaurants and what might influence their future consumption, Agricultural Marketing Service conducted a survey of 462 restaurants.

**The survey showed** that 31 percent of the vegetables purchased by these restaurants were in frozen form; 38 percent, canned; and 31 percent, fresh.

But whether you get frozen, fresh, or canned vegetables depends upon the items you order. If you select broccoli, lima beans, or cauliflower, the chances are 6 out of 10 that they have been frozen.

But should you order sweet corn, green beans, green peas, or asparagus, you'd probably be served canned goods. In fact, carrots and leafy greens are the only two vegetables that are consistently served fresh.

The story is the same for fruits and berries. The particular fruit you select determines whether it is canned, frozen, or fresh. More apples are purchased fresh, more cherries and strawberries are bought frozen, and more peaches canned.

For all the fruits, the purchases were about equally divided among frozen, fresh, and canned goods. However, restaurants did buy more in frozen form than was true for the overall domestic market.

In fact, 71 percent of the time you order orange juice it's likely to have been in frozen form. Restaurants squeeze only 23 percent of their juice from fresh oranges. Six percent use canned juice.

When it comes to poultry and meat, restaurant men follow a pretty uniform buying pattern. Four-fifths of the chickens purchased were fresh; two-thirds of the turkeys were frozen. Slightly less than one-fourth of the restaurants in the survey generally used frozen fabricated (precut) meats.

What the restaurant operators said they liked about using frozen foods were their time- and labor-saving aspects. They also liked the "fresh" flavor of frozen foods, the availability of frozen foods throughout the year, and the fact that most frozen items can be substituted readily for fresh foods.

Predominant reasons for not using frozen products apparently were lack of storage space and price.

Restaurant use of frozen foods in the future will depend upon population growth, the level of personal disposable income, and the competition among canned, fresh, and frozen food items.

The restaurant industry today takes in at least a fifth of the money spent for food and meals by the entire United States population.

If the expected growth in population takes place and if the Nation's pattern of "eating out" does not change, there should be, by 1975, about a 75-percent increase in the number of meals purchased away from home. To the frozen food industry this would mean an increase of 14 percent in the total frozen vegetable pack, a boost of 4 percent in frozen fruits.

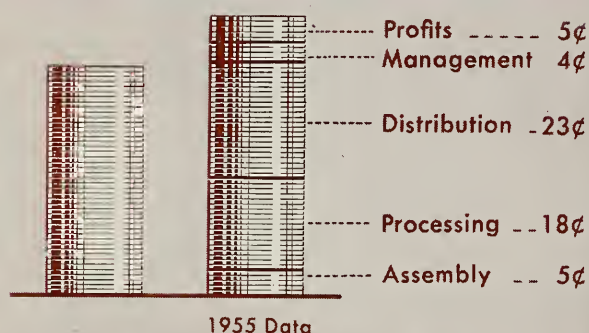
**Continually rising incomes** plus the trend toward higher priced meals and larger sized restaurants will further increase use of frozen foods in restaurants. Also, more frozen foods probably will be used if the trend toward portion-controlled foods continue.

From all indications, it looks as if the production of frozen foods, which has more than tripled since World War II, will find an expanding outlet in the restaurant industry.

## THE CONSUMER'S MILK DOLLAR

45¢ TO FARMER

55¢ FOR MARKETING



1955 Data

U.S. DEPARTMENT OF AGRICULTURE

NEG. 3415-56 (6) AGRICULTURAL MARKETING SERVICE

Almost everything we buy today costs us more than it used to. Milk is no exception. And all of us are interested in what makes up the price of this healthful food—the farmer, the marketing man, the consumer.

It is also the particular concern of our Marketing Research Division. This group studies the cost of marketing milk and other agricultural commodities and the price spread between the farmer and the consumer. This is all part of the AMS job of trying to improve the market for farm products.

Research shows us that consumers paid 20 percent more for a quart of milk in 1955 than they did in 1947. They also paid almost a cent more in the summer of this year than they did in 1947.

Although the price of a quart of milk increased by 20 percent from 1947 to 1955, income per person (after payment of taxes) went up about 40 percent during those 8 years. Thus, it takes a smaller part of the consumer's income to buy a quart of milk now than it did in 1947. Also, in terms of nutritional value, milk is still a bargain.

**Higher marketing costs** account for the increase in the retail price of milk. None of the increase went

## MARKETING COSTS FOR FRESH MILK

By Forrest E. Scott

to farmers. They received about the same amount for the milk in 1955 as they did in 1947. Because of this their share of the consumer's milk dollar dropped from 55 percent in 1947 to 45 percent in 1955.

The marketing margin—difference between the price consumers paid for a quart of milk and payment farmers received for an equivalent quantity—was a third wider in 1955 than it was in 1947-49. Most of this increase resulted from advances in wages and in prices of goods and services that milk dealers must buy.

**The cost of labor** amounted to about half of the marketing margin in 1955. Estimates made from data collected by the University of Indiana indicate that the labor cost per quart of milk handled was 25 to 30 percent higher in 1954 than in 1947-49. The labor cost per unit of product has not risen by as large a percentage as hourly earnings because the number of units handled per man-hour has increased.

Next to labor, containers represent the largest single element of cost in marketing milk. Prices of container paperboard were 20 percent higher in 1955 than the average for 1947-49; prices for glass containers were 43 percent higher.





Costs of operating milk delivery trucks have also increased considerably. Other costs such as fuels, rents, State and local taxes, advertising rates, and most other expense items have increased.

Marketing fresh milk includes three major functions—assembly, processing, and distribution. Most milk marketing firms perform all three functions. In 1955, these firms received 55 percent of the price consumers paid for milk. Farmers received the rest.

**Charges for hauling milk** from farms to processing and bottling plants represented about 5 percent of the retail price. Processing and bottling costs made up 18 percent. Distribution costs were 23 percent. The remaining 9 percent consisted of administrative costs and profits that overlapped the 3 functions.

Combining the three functions we find that wages, salaries, and commissions made up 25 percent of the retail price. Depreciation, property taxes, insurance, and other expenses made up 9 percent. Bottles and paper cartons accounted for 6 percent. Fuel, electric power, advertising, and other expenses were 10 percent. Profits were 5 percent.

The cost of assembling milk includes the cost of hauling it from farms and receiving it at processing plants. Assembly costs in cents per quart vary widely among markets, partly because of differences in the average distance milk is hauled. Hauling charges account for most of the assembly cost. Because of the weight, bulk, and perishable nature of milk, its shipping cost is high relative to its value.

Wages and salaries made up about a third of the cost of processing and bottling milk in 1955. Containers accounted for another third. Expenses connected with plant and equipment (such as depreciation, repairs, insurance, property taxes, interest, and rent) accounted for about a fourth of the total processing cost.

The remainder included electric power, fuel, water, various supplies, and miscellaneous costs.

Wages and salaries amounted to about 70 percent

of the total cost of sales and delivery. The proportion was larger for deliveries to homes and smaller for sales through retail stores.

Reductions in marketing services have partly offset the effect of rising wage rates and prices on the marketing margin. One of the more significant of these developments is the less frequent delivery of milk to homes. The practice of every-other-day delivery, adopted during World War II, was continued after the war. During recent years, delivery has been reduced to 3 days a week in most cities.

Another development which has tended to hold down the marketing margin is the increased quantity of milk sold in retail stores relative to that delivered to homes. In most markets, the margin is smaller on milk sold through stores than on milk delivered to homes.

During recent years, the average price per quart paid by urban consumers in retail stores has been more than 1 cent lower than the average for delivered milk. It costs less to distribute milk through retail stores than to deliver it to homes. But the average processing and container cost may be higher for milk sold in stores, because the proportion sold in paper containers is larger.

**Tank trucks** usually have reduced the cost of assembling milk. Milk stored in a refrigerated tank at the farm need not be collected every day. Less frequent collections reduce truck operating costs.

But before tank trucks can be used, dairy farmers must incur expense of installing refrigerated storage tanks and other equipment. The use of the tanks generally reduces the milk dealer's costs, and he frequently pays a premium price for bulk milk.

Every-other-day or less frequent collection and the use of tank trucks have increased the distance it is feasible to haul milk from farms to receiving plants. This has decreased the need for country receiving plants and more and more milk is being hauled directly to city plants.





# FOOD MARKET U. S. A.

## FARM 7 PERCENT



By Marguerite C. Burk and Thomas J. Lanahan, Jr.

A recent USDA report presents some preliminary results on food expenditures from a nationwide survey of household food consumption. The survey was made by Agricultural Research Service and Agricultural Marketing Service. In this article, two economic statisticians of AMS sort out some of the statistics to answer overall questions about our domestic market for food.

Figure by figure, a description of the U. S. food market is emerging from thousands of punch cards—  
♦ Families living in communities of 2,500 population or more and in the suburbs of large cities bought 69 percent of the food and meals sold in the U. S.

♦ Families with incomes of \$4,000 to \$6,000 after taxes made up 30 percent of the domestic food market.  
♦ Per person rate of expenditures for food at home and for food and beverages away from home averaged \$7.68 a week in the spring of 1955.

These punch cards contain information gained from 2-hour interviews with over 6,000 families about what foods they bought and used during one week in the spring of 1955. Earlier studies of food consumption indicated that spring was the most representative period of the year for food in general.

The survey was made to fulfill a need for recent and more detailed data on food consumption and expenditures by regions, townspeople, and farm families, and by income groups.

Survey data are still being tabulated. But the preliminary results give us a good idea of current rates of food consumption and expenditures in different parts of the country. Analyzing the data now available, we find that the Northeast States account for 31 percent of the U. S. food market; North Central, 32 percent; South, 24 percent; and the West, 13 percent.

A glance at the map on pages 8 and 9 will tell you which States are in each region.

Separating expenditures by urban, rural nonfarm, and farm families, the U. S. food market divides up into 69 percent urban, 24 percent rural nonfarm, and 7 percent farm. This does not mean that farm families consume only 7 percent of the food supply. They buy only 7 percent of the food and meals sold.

Families living in communities of 2,500 population or more and in the suburbs of large cities are classified as urban. Those living outside urban areas and not operating a farm are called rural nonfarm.

The survey also showed that housekeeping families in the U. S. spent, on the average, \$26.34 a week for food at home and for food and beverages away from home during the spring of 1955. Looking at this figure a little closer, we find that \$21.58 of this was for food consumed at home. The remainder, about \$5, was spent for food and beverages away from home.

Even though the survey only covered households in which at least 10 meals were served at home during the week, 18 percent of total expenditures for food and beverages was spent away from home by families reporting. Over three-fourths of all the families spent something for meals and beverages away from home during the week before they were interviewed.

It used to be that farm families ate almost all their meals at their own homes or others' homes or carried their lunches from home. But the survey found that two-thirds of the farm families bought some food away from home in the spring of 1955.

About 12 percent of the total food and beverage expenditures by farm families across the country went for food and beverages away from home. These figures include money for school lunches and for the snacks and meals when families go to town.



## RURAL NONFARM 24 PERCENT



The average size of the families surveyed was 3.43 persons. The per person rate of expenditures for food at home and for food and beverages away from home in the U. S. averaged \$7.68 a week. But the regional averages varied: Northeast States, \$8.91; West, \$8.86; North Central, \$8.08 and South, \$5.87.

Behind those averages lie differences in the proportions of urban, rural nonfarm, and farm families; also, differences in family incomes and in the number of mouths to be fed out of each income; differences in quantities and kinds of foods and food marketing services bought; and a lot of other factors.

Here are some dollar figures which show *differences in per capita outlay for food by urbanization*:

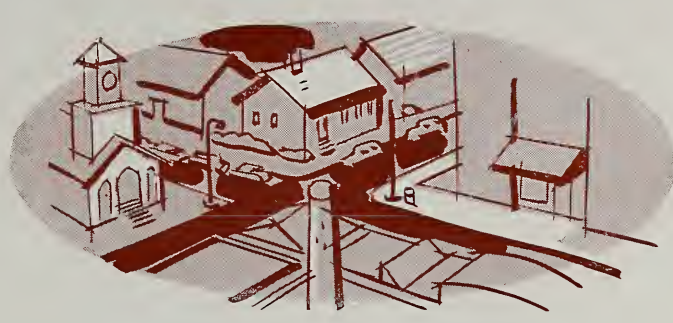
	Urban	Rural Nonfarm	Farm
Total U. S.	\$8.90	\$6.70	\$4.21
Northeast	9.63	7.42	5.33
North Central	9.47	7.04	4.59
South	7.02	5.65	3.50
West	9.33	8.69	5.57

Those averages do not include the value of home-produced food. But they are the right figures to use in talking about the commercial market for food.

We all know that family income after taxes has a lot to do with how much food people can buy, and what they will pay. This survey gives us new data for studying the relationships between income and expenditures and consumption within regions.

Take the \$7.02 per capita rate of food expenditure among urban families in the South, as an example. It represents a combination of the average expenditure of \$8.24 by the relatively few single people included in the sample, of \$5.21 by families of 2 or more with incomes under \$2,000 after payment of taxes, of \$6.17 by those with incomes of \$2,000 to \$4,000, of \$7.63 for the \$4,000 to \$6,000 group.

## URBAN 69 PERCENT



It also represents the average expenditure of \$9.34 spent for food per person in urban families in the South with \$6,000 incomes or more, and an average of \$8.73 per person for families not reporting their income—but apparently with relatively high incomes.

About 55 percent of the people in the urban families of the South covered by the survey were in families with incomes under \$4,000 compared with the 25 percent in the remainder of the United States.

Consider now the *significance of family incomes to the whole U. S. food market*. Families of 2 or more persons having incomes after taxes of less than \$2,000 accounted for only about 8 percent of total food expenditures reported. But these families included 13 percent of the people covered by the survey.

Families in the income group \$2,000 to \$4,000 made up 24 percent of the total U. S. food market, compared with 28 percent of the population. Another 30 percent came from families reporting \$4,000 to \$6,000 incomes after taxes. A fourth of the food money was spent by families reporting incomes of \$6,000 or over, 10 percent by families not reporting their income, and the remaining 3 percent by single-person households.

From the map on pages 8 and 9, you can follow through on the breakdown of the food market in each region according to urbanization and family income.

In the near future, the Department of Agriculture will issue additional reports based on this nationwide survey of household food consumption. These reports will include average quantities of food consumed and their money value for 200 food items by income groups within each category, and other byproduct data.

Reports will also be issued on dietary levels, home food preservation practices, home food production, and home baking practices.

# U. S. FOOD MARKET



13%

## DISTRIBUTION OF U. S. FOOD MARKET BY URBANIZATION

	ALL REGIONS	NORTHEAST	NORTH CENTRAL	SOUTH	WEST
U. S. Total	100%	31%	32%	24%	13%
Urban	69	77	69	55	74
Rural Nonfarm	24	20	22	34	21
Farm	7	3	9	11	5

Percentage distribution of total food expenses excluding alcoholic beverages purchased for home use of families covered in 1955 Survey of Household Food Consumption. Includes away from home expenditures for food and alcoholic beverages.



# . in Spring of 1955



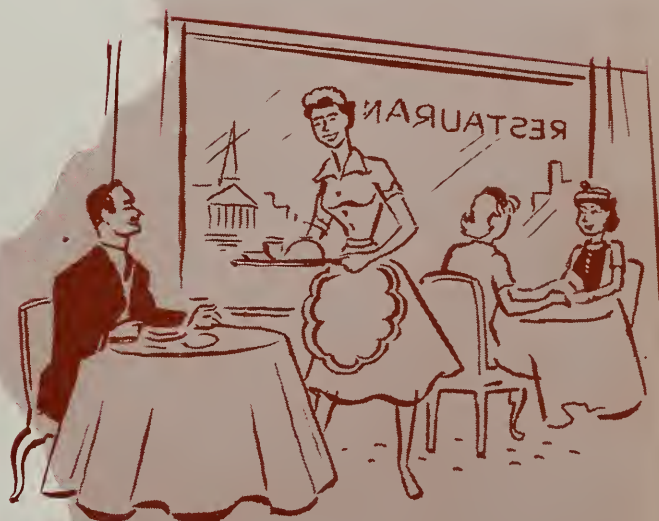
32%



31%



24%



## DISTRIBUTION OF FOOD MARKET BY FAMILY INCOME

INCOME AFTER TAXES	ALL REGIONS	NORTHEAST	NORTH CENTRAL	SOUTH	WEST
Under \$2,000	8%	4%	5%	17%	4%
\$2,000-\$4,000	24	23	20	34	22
\$4,000-\$6,000	30	33	31	23	30
\$6,000 and over	25	24	32	15	31
Unclassified	10	13	9	8	9

Data are for families with 2 or more persons. One-person families—4 percent in the West, 3 percent in all other regions—account for the remainder.

Farm wife to housewife

# WHO GETS THE MONEY FOR EGGS

... when 2 truckloads of eggs go to market  
who shares in the returns ... how much does  
it cost for the marketing process ... what  
share goes to the country assembly plant, the  
trucker, the city distributor, and the retail  
grocer ... what comes back to the farm wife?

By Robert M. Conlogue and Leo R. Gray



... 55 percent of the consumer's egg dollar ...

When Mrs. John Farmer of Albert Lea, Minn., made her daily egg-gathering rounds last May 30th, she again set in motion the familiar farm-to-market process. She—and her midwestern neighbors—gathered the produce that could within the week appear on breakfast tables far across the nation.

Over the years this familiar task had meant good returns for the farm wife. But Mrs. Farmer was not the only one who had a stake in the sale of the eggs gathered that morning. The country assembler, the trucker, the city distributor, and the retail grocer would also share in the retail price per dozen.

To find out just what the marketing margins and costs would be, Agricultural Marketing Service researchers traced this particular batch of eggs—and those of many of Mrs. Farmer's neighbors. They followed two truckloads—over 15,000 dozen eggs—through the marketing process during the last week in May and first week in June of 1956.

They wanted to know just what the price spread was for eggs; how much eggs would sell for on the retail market in an eastern city; what proportion the farm wife would be paid. Detailed data on prices and operating costs and practices were obtained from all the marketing agencies involved.

**For Mrs. Farmer's eggs**—large Grade A and cartoned—the farm-to-retail price spread was found to be 26 cents. Mrs. Farmer's share of the consumer's egg dollar was 55.1 percent.

In dollars and cents paid for the eggs and to Mrs. Farmer, it came out like this: Consumers in the city paid 59 cents per dozen. Mrs. Farmer and her neighbors received about 32.5 cents per dozen. The remaining 26.5 cents—the total marketing margin—was divided among the country assembler, the trucker, the city distributor, and the retail grocer.

The country assembly plant received 41.75 cents per dozen for the large Grade A cartoned eggs, and 37.75 cents for the large Grade A loose eggs which were also included in the truckloads studied. This made a gross margin for the country assembly plant of 9.17 cents per dozen for the cartoned eggs and 5.17 cents for loose eggs.

On all eggs making up the two truckloads, the gross margin to the country assembly plant was 8.03 cents per dozen.

During a previous period, which may be considered typical, operating expenses at the assembly plant averaged 7.64 cents per dozen. Transportation costs to the eastern city averaged 2 cents, and operating costs for the city distributor came to 3.81 cents per dozen.



Thus, the total operating costs of the country assembler, the transportation line, and the city distributor were 13.45 cents per dozen eggs.

In the present study, average prices paid per dozen by retail stores, restaurants, and other outlets for these large Grade A white and mixed eggs were: large white cartoned, 49.16 cents; large mixed cartoned, 48.04 cents; and large white loose, 48.46 cents. Average farm-to-store margins could thus be figured at 16.58, 15.46, and 15.88 cents per dozen, respectively.

The differences between these particular price margins and actual operating costs were available to cover overhead, net profits, and losses on other shipments.

**Retailers added an average margin of about 10 cents per dozen and sold large Grade A cartoned eggs for an average price of about 59 cents per dozen during the period of this study.** Some small independent retailers who handled large Grade A loose eggs took an average margin of about 12.5 cents, selling these eggs for an average price of about 61 cents per dozen. The higher price for loose eggs appeared to be the result of selling them in less than one-dozen lots.

For the two shipments studied by AMS researchers, the farm-to-retail price spread on large Grade A cartoned eggs was about 26 cents, and on large Grade A loose eggs about 28 cents per dozen. With these price spreads, the farmer's share of the consumer dollar was 55.1 and 53.4 percent, respectively. These spreads compare favorably with average farm-to-retail price spreads of 28.5 cents on midwestern eggs sold by Washington, D. C., independent grocery retailers in 1954.

**Discussions with plant and company officials and observation of plant operations indicate that satisfactory results for top-quality eggs are obtained at the country assembly plant by (1) picking up eggs directly from producers at least twice weekly; (2) placing eggs in a holding room at 40-degree temperature and 80-degree humidity immediately upon receipt at the assembly plant; (3) candling, cartoning and shipping eggs from the plant within 3 to 5 days after their receipt; (4) shipping in trucks held at temperatures of 35 to 40 degrees, and (5) holding time-in-transit to a minimum by using two drivers so that trucks can be kept rolling continuously.**

The city receiving plant helps maintain the quality of these eggs by moving them directly from the trucks to cooled holding rooms. The eggs are delivered to retail stores the same day they are received, or as soon thereafter as possible.



Feeding cartons and flats into chutes at country assembly plant.



Girls cull and grade eggs. These eggs will automatically be deposited in cartons and flats moving along the conveyor line.



Power-driven conveyor moves cases of cartoned eggs from country assembly plant into truck for shipment to an eastern market.





## WOMEN'S ATTITUDES TOWARD

# Wool

*By Esther S. Hochstim*

When women talk about fall, winter, and spring suits and skirts, most of them automatically think of wool.

They have had more experience with this material and prefer it and its blends to other fibers. They particularly like its wearability and shape retention, its warmth, and its rich, smart appearance.

To find out what women think about wool and other fibers, 2,425 interviews were conducted for Agricultural Marketing Service. The survey was another phase of the Department's program to help expand the market for agricultural commodities.

Interviewers talked with homemakers and other women between 18 and 65 years of age. They asked all sorts of questions—got all sorts of answers.

The survey was restricted to readymade items worn in the past year. It included sweaters and cool weather suits and skirts.

Women were asked, for each of the three items of clothing, what fibers they owned, had bought in the past year, had most experience with, and preferred. They were also asked what they liked and disliked about various fibers.

Often, preference tied in closely with the fiber with which the women had had the most experience. In suits and skirts, this tendency was usually for wool. About 8 out of 10 women who said they had had the most experience with this fiber preferred it.

For sweaters, on the other hand, Orlon received the highest vote. Nine out of 10 women who had the most experience with Orlon sweaters preferred them.



In the total picture, here's how wool and wool blends stacked up against other fibers and blends.

For suits, 80 percent preferred wool and wool blends. The remaining 20 percent was scattered among all other materials. When it came to skirts, 71 percent named wool and its blends as the fibers of their choice. The next closest ranked fiber was cotton, which rated a 10-percent preference for fall, winter, and spring skirts.

Wool and wool blends in sweaters accounted for a 43-percent preference. Here, Orlon and nylon also ranked high. Thirty-three percent specified Orlon as their choice; 12 percent named nylon.

But these women did not just prefer wool and wool blends in their fall, winter, and spring suits and skirts. They bought them in larger proportion than other fibers.

Wool and its blends were the principal fibers chosen for suits and skirts—both this year and in years past. Rayon or acetate and cotton were also bought rather generally. But aside from Orlon in skirts, no other fiber was purchased in the past year by more than 2 percent of the women.

Although wool was the leading sweater fiber owned, it ranked second to Orlon among the fibers bought in the past year. Nylon, cotton, cashmere, and wool-blend sweaters were also owned and bought by substantial numbers of women.

The reason for this marked preference for wool and wool blends is of special interest to fabric producers and marketers. So the obvious question was asked. "What do you like about wool?"

Outstanding among wool's virtues in the minds of suit and skirt owners was its performance. They said it wears well, holds its shape and doesn't wrinkle or soil easily. They liked its warmth as well.

Also important were its attractive appearance and its ease of care—particularly that it cleans well and looks well after dry cleaning.

The great majority of comments on wool for sweaters related to its warmth. This feature was mentioned by more than twice as many women as was its good wearing quality. Appearance, ease of care, and texture were also named by important numbers.

In addition to pointing out the "good" features of wool, the women also listed what they liked about the other fibers. The major advantages cited for rayon or acetate in suits and skirts were coolness, performance, and ease of care.

Among the smaller groups of women who were familiar with Orlon or Dacron in suits and skirts, ease

of care and performance also ranked highest.

Women liked Orlon and nylon in sweaters because of their washability, performance, and texture. They praised cashmere sweaters mainly for their softness.

But comments were not all good. Interviewers made a special point to try to find out what the women considered "not so good" about the various fibers.

However, fewer women named "bad" things than "good."

More than half said there was nothing they disliked about wool for cool-weather suits or skirts. About 2 in 5 said this about wool for sweaters.

Among those who did criticize wool, a leading comment came from women who considered themselves allergic to it or found it irritating.

Particularly for sweaters, women spoke of difficulty in caring for wool. They said that it shrinks, doesn't wash well, or needs to be dry-cleaned.

About 5 women in 10 criticized rayon or acetate for suits and skirts. Three in 10 commented on performance. These women complained that it wrinkles easily, becomes shiny, doesn't keep its shape, and just generally doesn't wear well.

For sweaters, about half the respondents said there was nothing they disliked about Orlon. And 3 in 10 said they had no complaints about nylon.

Inasmuch as an additional 4 in 10 knew nothing about these fibers and therefore did not comment, criticism was slight. About 2 sweater wearers in 10 said nylon sweaters don't keep their shape.

The largest number of complaints about cashmere for sweaters was its cost, mentioned by 1 in 4.

A more detailed report on "Women's Attitudes Toward Wool" will be published early in 1957.



Sweaters and skirts made of wool and its blends prove popular. Like this young lady, most women like the wearability, warmth of wool and wool blends.

# TRUCK DELIVERY OPERATIONS OF A WHOLESALE GROCER

*By James R. Snitzler*

If you are a grocery wholesaler offering free delivery service to your customers, it may be well to take stock of what this service costs you. According to a recent Agricultural Marketing Service study, it doesn't always pay to deliver free of charge.

This is particularly true for orders of \$25 or less delivered in rural areas. On these orders, one Baltimore, Md., wholesaler paid delivery costs of 18.5 cents per dollar of sales, while the gross profit of the firm was only 8 cents per dollar.

On orders of the same size to urban areas and for orders of \$25 to \$75 to rural areas, delivery costs ranged from 5 to 6 cents per dollar of sales. It seems probable that here, too, the wholesaler lost money.

Obviously, delivery costs which equal over 60 percent of the firm's gross profit are too high. Yet these excessive costs occurred on over one-third of the orders delivered by the Baltimore wholesaler.

**Marketing researchers** consider this Maryland firm representative of other independent wholesale grocers in the area. The company, with an annual volume of business larger than the national average for grocery wholesalers, sells to institutions, hotels, restaurants, and retail stores.

It makes deliveries both within Baltimore and within a 45-mile radius of the city.

A fleet of company-owned trucks—6 straight trucks, 5 truck-tractors and 9 semitrailers—delivers the wholesaler's merchandise. The straight trucks make city deliveries while the tractor-trailers and semitrailers alternate on rural-area deliveries.

To cut delivery costs on small orders in both urban and rural areas, AMS transportation analysts suggest selling on a cash-and-carry basis only; consolidating deliveries and making them less frequently; charging for deliveries; or fixing a minimum-size order for delivery.

Over-all adoption of these suggestions however, is not recommended. The wholesaler should first take a look at the growth potential of his small customers. He should decide whether large orders purchased by the same retailers would justify the losses on occasional deliveries of small orders.

**Another factor the wholesaler should consider** is how much c.o.d. orders cost him in time and expense. The Baltimore case study showed that c.o.d. orders accounted for a large share of delivery costs. For example, labor expenses on c.o.d. orders were 18 to 51 percent higher than for charge orders because of the time spent in making collections.

On the other hand, allowing the customers to charge the order is not always a good idea either. This, too, may result in heavy collection costs.

But from the delivery point of view, errors in planning and scheduling present one of the greatest problems. For the Baltimore firm, 11 of the 19 trips studied were poorly routed. The number of errors ranged from 1 to 4 per trip.

In a rather obvious example of misrouting, two retailers were served in a sequence which involved running twice around the block to unload. The alternative was proceeding straight to the second store and hand-trucking the merchandise across a busy street and over streetcar tracks—a still worse method.

By simply changing the delivery sequence of the two stores, this extra driving or hazardous unloading was eliminated.

Such errors in judgment result in extra expense, lost time, and more work. They create ill will among the customers who find schedules unreliable and deliveries often late.

Transportation experts feel that closer cooperation between drivers and dispatchers eliminates many of these problems. If drivers report such difficulties,



as well as any changes in streets and highways which affect delivery operations, it is easy to improve trip routing.

**Dispatchers can also assign trucking routes** more realistically if they periodically review current routes. For example, the Baltimore wholesaler had 5 drivers and 3 helpers on rural routes who, in a typical week, piled up over 70 hours of overtime. Five other drivers and 1 helper on other routes put in less than the guaranteed overtime.

A reallocation of customers between routes requiring less than 8 hours and those requiring more than 9 hours would distribute overtime more evenly. It would reduce the amount of overtime hours put in by drivers and helpers on the longer runs and give others a chance to get in their minimum hours of work.

An improved method of loading and unloading orders was also suggested for the Baltimore firm. When tested in actual operation, the new plan showed a 50-percent saving in time as well as a reduction in loss and damage of small articles.

In this procedure, all pieces are marked with order numbers, and the number of pieces per order is written on the invoice sheet. Drivers break down the orders at each stop by package number and piece count. Inside the store, the drivers or their helpers make an item-by-item check with the invoice.

To insure against loss and damage, small items are numbered and placed in a large carton near the tailgate of each truck at loading time. Loaded in rotation, they are removed as each order is unloaded.

On all routes using both a driver and a helper, the driver breaks down the load at each stop, levels the load if necessary, and closes the truck. The helper moves the merchandise into the store, checks it with the storekeeper, and collects, if a c.o.d. order. For large orders, the driver assists the helper in moving the merchandise into the store.

This more efficient method of loading and unloading can be further implemented by the use of proper delivery equipment. For example, the addition of a side door on the road side of the trailer, as well as on the curb side, would eliminate a considerable amount of out-of-route circling.

The replacement of a heavy movable tailgate and short rear doors on one of the trailers with a permanently suspended tailgate and flush doors would make it easier for the driver or his helper to open and close the trailer.

Also, the 18-ton trailers used by the Baltimore wholesaler on the rural runs were much larger than necessary. Therefore, it was recommended that the firm consider 12-ton trailers when replacing the present equipment.

**Not only would the adoption** of these recommendations reduce the delivery expenses of the firm studied, but many of these suggestions should also be useful to other grocery wholesalers.

The Baltimore wholesale grocery firm is not an exception. It is but one of many companies plagued by costly delivery errors. Any reduction of these errors will mean reduced delivery costs.



The wholesale firm studied delivers groceries in the city and within a 45-mile radius of the city, using straight trucks, truck-tractors, and semitrailers.

OFFICIAL BUSINESS

# FROZEN FRESH CRANBERRIES

*By J. Scott Hunter and Wilbur F. Buck*

Fresh cranberries, always considered a part of holiday menus, may be appearing on dinner tables in the usually off-season months as well. Not the round plump berries you buy at your produce counter, but equally plump and tasty frozen fresh cranberries.

In a trial run this spring in Minneapolis and St. Paul, Minn., frozen fresh cranberries met with the general approval of those who sampled them. About 9 out of 10 users were completely satisfied with the product.

But even more important to cranberry producers, processors, and retailers, 96 percent said they would like to be able to buy frozen cranberries again in the spring and summer. This is the off-season period when usually only canned cranberries appear on the market.

Production of frozen fresh cranberries for sale when the fresh berries are out of season would make the fresh fruit available the year round.

To evaluate customer response to frozen fresh cranberries, the Market Development Branch of AMS and the Marketing Division of FCS conducted a study in the Minneapolis-St. Paul area. Researchers obtained the names of those who bought frozen cranberries during peak shopping periods in 10 supermarkets. These 473 consumers were later interviewed by telephone after they had used the cranberries.

**Almost half of them** liked frozen cranberries just as well as fresh berries. Another 40 percent liked the frozen product better than the fresh.

An even larger percentage—87 percent—preferred frozen cranberries over the canned fruit.

One reason for this satisfaction with frozen cranberries was their good flavor. Respondents described it as “a real fruit flavor” or “a delicious flavor.”

Although only 12 percent had any complaints about the frozen berries, their criticisms may be of value

to processors in minimizing consumer dissatisfaction.

One criticism of frozen cranberries was that the sauce did not jell or was too slow to jell. This was probably because frozen berries contain more moisture than fresh berries, which lose as much as 31-percent moisture in storage. Possibly, cooking the frozen berries in less water would eliminate this problem.

A second type of complaint referred to the poor quality of some of the frozen berries. A few women noted soft or wilted berries in the package. Some berries were not yet ripe; others were overripe.

**Buyers were also asked** what they thought of the size of the box and the suggested recipes on it. For the most part, reactions again were favorable.

The box used held 1 pound. Its dimensions were 7-3/4 x 3-3/4 x 2-1/3 inches. It was at first thought that this size might be considered too large for convenient refrigerator storage or that it would hold more cranberries than a small household could use at one time. But, 9 out of 10 approved of the size.

As for the recipes on the box, 76 percent of the women who used them found them simple to follow and liked their results.

Sixteen percent didn't like the recipes. Here again the homemakers were not satisfied with the consistency of the sauce. They considered it “too thin” or “too runny” and said that the berries needed to be cooked longer than the recipe suggested.

From these data, it is apparent that most purchasers were well pleased with frozen fresh cranberries.

However, it is not possible to predict, from this study, the potential off-season sales volume with extensive advertising and promotion, nor the effect of off-season sales on the total sales volume per year. Neither can one suggest the relative appeal of frozen cranberries and fresh cranberries if both were available at any one time.